AAZK NEWSLETTER



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FEBRUARY 1969

AMERICAN ASSOCIATION OF ZOO KEEPERS

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3388 GRANADA AVENUE SAN DIEGO, CALIF. 92104

APRIL CONFERENCE Roeding Park Zoo, Fresno, Calif., Dr. Paul Chaffee,
Director, will host the first Far West Regional AAZK Conference on
Friday and Saturday, April 11-12,1969.
*Headquarters for the conference will be Del Webbs Towne House, Fresno.
*Registration at hoteI-April 10-6 P.M. to 8 P.M. & April 11-8 A.M10 A.M.
*Fee-\$7.50 per person(Conference fee includes ONLY luncheon at zoo,
banquet, and transportation from hotel to zoo and return.)
*Room rates-Del Webbs Towne House-\$12.00 single(1 Person), \$17.00 double
(2 Persons). *Banquet-April 11,1969-Guest Speaker-Dr. Paul Chaffee, Fresno.
*Programs will consist of Keeper talks, films, slides and tapes.
*Wives Program planned.
*All AAZK members are urged to attend. Those interested in attending are
asked to fill in form below and mail before March 1,1969.
puring SEATED SE
Sirs:
I am interested in attending the April Conference of AAZK at Roeding
Park Zoo, Fresno, Calif. Please forward conference registration card,
information on hotel and other literature about the conference.
NAME
ADDRESS
CITY STATE ZIP
I do (do not) plan to bring a guest.
I do (do not) plan to stay at headquarter's hotel.

THIS MONTH'S NEWSLETTER REPORTERS

ROOSEVELT CUNNINGHAM-Jimmy Morgan Zoo, Birmingham, Ala. KATHY ARENDS-St. Louis Zoological Park, St. Louis, Mo. DEWEY GARVEY-Brookfield Zoo, Brookfield, Ill. GEORGE BADANICH-Pittsburg Zoo, Pittsburg, Pa. KEN KENNEDY-Stanley Park Zoo, Vancouver, B.C., Canada JOHN M. HALE-Crandon Zoological Park, Miami, Fla. ED ROBERTS-Middlesex Fells Zoo, Stoneham, Mass. BOB COLLINGE-Topeka Zoological Park, Topeka, Kansas GEORGE E. WARNICK-Central Park Chapter AAZK. New York MARVIN JONES-Foreign News

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DENNIS MELVIN

DOLLIE WILLINGHAM
JOY BJORNSON
BOB DILL

FROM THE DESK OF THE NATIONAL EXECUTIVE SECRETARY Dear Member,

Mr. Ronald T. Reuther, President of the American Association of Zoological Parks and Aquariums, has appointed a committee under the chairmanship of Mr. Gary Clarke, Director of Topeka Zoological Park, Topeka, Kansas, to promote a liason between that organization and ours. I have selected a similar committee to formulate a line of communications to this effect. An attitude of cooperation and joint agreement of certain projects will prove beneficial to our mutual interest.

Mr. Reuther's interest in AAZK is very encouraging. Chairman of the AAZK Committee is Mr. Randall Reid, Regional AAZK Coordinator, Jimmy Morgan Zoo, Birmingham, Alabama.

Periodic reports of these two committees will be published for all members.

RICHARD G. S.W.EENEY

<u>WE WOULD LIKE TO EXTEND OUR THANKS</u> to the seven zoo directors who have allowed us the privilege of designating their zoo as a regional head-quarters for AAZK.

Our sincere appreciation goes to Dr. Paul Chaffee-Roeding Park Zoo, Fresno, California.

Mr. Gary Clarke-Topeka Zoological Park, Topeka, Kansas.

Mr. Bob Truett-Jimmy Morgan Zoo, Birmingham, Alabama.

Dr. Phil Ogilvie, Oklahoma City Zoo, Oklahoma City, Okla.

Mr. Bob Mattlin, Memphis Zoo, Memphis, Tennessee.

Floyd Lodge, Detroit Zoo, Detroit, Michigan. Acting Director, Middlesex Fells Zoo, Stoneham, Mass. The regional coordinators from your zoo are a valuable asset to our progress. Thank you for allowing them to serve us.

NEWS FROM BIRMINGHAM (JIMMY MORGAN ZOO) reported by Roosevelt Cunningham We consider this to be one of the top ten zoos in the United S tates and we are approved by the U.S.D.A. This is a tremendous. accomplishment for our young zoo. This has been attained under the able direction of Bob Truett, our Zoo Director. We now have several projects under construction at the Zoo including Birds of Prey cages, a flood control culvert and a new bridge. Our keeper education continues this winter with the subject being Reptiles and Amphibians. Our attendance is 100%.

We recently returned our female Pygmy Hippopotamus from the National Zoo where she was sent to be bred. Her first baby did not survive and we have high hopes for her the second time...

New additions to the collection by birth at the zoo include: 2 retz Conures 1 Drill 1 Sclater's Guenon 1 Axis Deer

· 2 Petz Conures

2 Black Leopards

1 Spider Monkey

NEWS FROM ST. LOUIS ZOO reported by Kathy Arends Recent births: 20 Boa Constrictors-Jan. 4

1 Pygmy Hippo-Nov 20

1 B & W Colobus-Oct. 22

1 Hamadryas Baboon-Nov 1

1 De Brazza's Guenon-Dec. 10

2 White Bearded Gnu

Recent arrivals: 8 Emperor Penquins 8 Adelie Penquins 8 Skuas 2 Nenes 3 Tufted Puffons

2 Cassowary chicks (from Scotland)

A new exhibit was set up in December and has been named "Potpouri". It is a rotating exhibit in the small mammal wing of the Zoo. It includes local mammals as well as other small mammals not found locally. At present there are galagoes, hedgehogs, local bats, pack rats and many others. The exhibit was designed to acquaint the public with many mammals which otherwise wouldn't be available for display.

One of our nursery keepers is planning a trip to Africa on Feb.3. Gail Bentzinger hopes to spend from 3 to 6 months visiting various game preserves throughout Africa.

NEWS FROM BROOKFIELD ZOO reported by Dewey Garvey

Sally, probably the second oldest Chimp in captivity, has died. More details next month.

Births: 1/1 Sitatunga 1/1 Greater Kudu

O/1 Axis Deer 1/0 Addax O/1 Guanaco 1 Owl Monkey

1 Parma Wallaby 1/0 Orangatan 1 Parma Wallaby O/2 Collard Peccary

NEWS FROM PITTSBURG ZOO reported by George Badanich

Age is taking its toll of our more popular residents. Our famous mother of four, Tiny, the female Rhino, is dead. So are our pair of European Bears who have spent about 25 or more years here. Our oldest

Water Buffalo and our oldest pair of Sea Lions are gone too, but the new additions-Clouded Leopard, Black Fanthers and pair of Polar Bears are doing a fair job of filling in.

Mr. Richard Young has transferred to Parks & Recreation, replacing

Dick is Mr. Edward O'Connor.

New Bear Keeper is Mr. Thomas Dickerson.

Joseph Bishop is now relief keeper.

We'd like to thank Harry Pugh, helper in Pachyderm Department, for filling in as keeper during the holiday--doing an excellent job.

THE NEWSLETTER STAFF WISHES TO APOLOGIZE for listing Rusty Spearman as male. Please be advised that Rusty should be listed as 0.1.

NEWS FROM STANLEY PARK ZOO reported by Ken Kennedy

Every zoo takes pride in the animals they have on display. I think, that equally important are wild animals one can see naturally around the zoo.

On December 28,1968, the Vancouver Natural History Society held its annual Christmas Bird Count. The temperature was below zero most of the day warming up to about 15 degrees. There was snow on the ground and ice covering most of the small water areas. However, the birders spotted 81 species of birds for just the Stanley Park area. Some of the more unusual ones were:

2 red-necked Grebes 9 Bald Eagle

1 white-fronted Goose 120 black Turnstones

7 Ring-necked Ducks 22 Ruddy Ducks 1 Blue Goose 1 Long-eared Owl 8 Red-breasted Nuthatch 15 Red Crossbills

With below normal temperatures it has been a chore to keep the outdoor ponds from freezing up. The flamingos have remained outside throughout the cold weather but they use their shelter to keep out of the wind and snow. The wolves on the other hand are in their new outdoor area and enjoy the cold weather.

The 2 baby hyrax that were born here in December both died suddenly on January 15,1969. They were a month old.

NEWS FROM CRANDON ZOOLOGICAL PARK reported by John M. Hale

Construction of our new elephant exhibit should be finished by the end of February. When opened, zoo visitors can see our three Asiatic elephants feed or play without looking through bars or wire. The paddock will be surrounded by a most and low rocky barrier. The elephant house can hold up to six or seven elephants. Everything possible has been done for their comfort, and for the safety of the keeper. The stalls are open enough at both ends so the keeper can jump out if the elephant gets too close. Four large watering troughs with drains have been put inside. Cleaning will be made easier because of the truck dock at the back of the building. All waste can be swept into the back of the truck, then a good hosing down will finish the job. The cost of the new exhibit is about \$85,000. We hope it will be entertaining for zoo visitors.

NEWS FROM MIDDLESEX FELLS ZOO reported by Ed Roberts

Winter births: 3 Black Buck Antelope

Recent donations: 1 exceptionally tame Coyote-7 months old-a beautiful specimen.

Recent arrivals: 8 glossy Starlings 4 Scholows Turacos
2 Red Billed Magpies 4 Blombergs Toads

Tentative plans for the Zoo in the spring of 1969 include a Children's Zoo section of small animals, purchase & delivery of 8 sea lions for our seal exhibit and more exotic waterfowl for our lagoons.

On January 17,1969, Leonard, our 4 year old giraffe died after slipping in his stall in the Giraffe House. We found him with his back legs spread eagled and unable to regain his feet. He must have torn his muscles and tendons in both legs, so we rigged up a sling via chain falls and got him off the ground. For two days we tended Leonard and it looked like he was coming along fine and he was able to put weight on his back legs. One morning we found him dead in his sling the victim of acute bloat.

If any member of the AAZK has had any problems of this nature, kindly contact me and tell me how you handled it and what you did to alleviate this condition. We don't want the same thing to happen to his mate. Plans are now under way to replace Leonard with Lenny II another Massai Giraffe coming about the middle of July.

MR. SAM LOCKHART, KEEFER AT THE N.I.H. PROJECT, San Diego Zoo, has been appointed photographer for the San Diego Chapter of AAZK.

NEWS FROM TOPEKA ZOOLOGICAL PARK reported by Bob Collinge

The motion picture "Doctor Dolittle" was presented as a fund raising benefit by the Friends of the Zoo on December 20,1968. The attendance was larger than anticipated and the organization realized a profit of approximately \$800.00. As an added attraction, a number of animals from the Zoo were on display in the lobby of the theater.

The Friends of the Zoo recently purchased heavy winter parkas as Christmas presents for the Zoo staff. The coats were greatly appreciated because of the severe winter weather.

Construction was started late in December on the Visitors Service Building located at the main entrance of the Zoo. This building will house a large concession area and public restrooms. It is due to be finished early this spring. Immediately following the completion of this building, the Topeka Park Department will construct a new admission facility. This will be located directly beside the Visitor Service Building.

Recent births and hatchings include: 3 Peach-faced Lovebirds

1 Llama 1 Galago 1 Nale Brush-tailed Phalanger

Recent accessions include: 1 Scarlet Ibis

1.0 Four-eyed Possum

OUR DEEPEST SYMPATHIES go to the family of Pierre A. Fontaine, Director of Dallas Zoo. Mr. Fontaine's death creates a great void in our profession. His devoted service to the AAZPA and his support of AAZK will long be remembered.

THE CONSUMPTION OF WILDLIFE BY MAN; by William G. Conway, started in December's Newsletter, is being printed in full to accompany this issue.

A TRAGIC LESSON by Chris LaRue, Topeka Zoological Park

The death of an animal in a zoo is a tragic loss but it also can be a lesson even though it is learned the hard way. The recent death of a young zebra in one of our American zoos shows that animal knowledge isn't being taught to every zoo man or at least to a sufficient number to stop such tragedies. In this case two young zebras were being released into new quarters. One young zebra bolted across the enclosure and hit a chainlink fence which resulted in the death of the zebra.

This isn't the first time such accidents have happened and unfortunately it probably won't be the last. There are ways to stop these kinds of accidents and zoo keepers need to know them. Spreading this knowledge is one of the important functions of the AAZK.

Many keepers know how to stop these accidents but for those who don't there are a few rules that should be followed. When shipping zebras or other hoofed stock it is best not to tranquilize the animal before shipping but on arrival it can be beneficial to tranquilize the animal when it is being removed from the crate. Before releasing hoofed stock into a new enclosure the fencing should be covered with burlap bags or some kind of material so the animal can see the limits of his enclosure. When releasing an animal from a crate it is safer to

to release the animal inside a building preferably with no people around. A helpful trick is to smear the walls of the new stall with the animal feces and soiled bedding from the shipping crate, this helps to cover up strange smells in the stall. A little knowledge, a little extra time, and a few extra precautions can go a long way in stopping unnecessary accidents in the zoo.

WHAT THE ZOO KEEPER SEEKS -- COSTS NO MONEY AT ALL by George E. Warnick, Reporter, Central Park Chapter, AAZK

It was with rare anticipation that the New Yorl Chapter of the AAZK combining Queens, Brooklyn and Central Park Zoo held their first meeting on November 25,1968. At the present time we have forty-five members and are assured of at least fifteen new members during the coming year.

In part, the enthusiastic response to our membership drive was prompted by the over whelming need for a vehicle through which Keepers could voice their opinions, air their views and indeed indulge in their gripes.

Too long have we been looked upon by the uninitiated merely as workers who fed and cleaned up after animals. Psychologically speaking, a need to be recognized as an important integral part in zoological complexes is as important to some degree as monetary values.

As an added attraction to our meeting, we were privileged with a lecture on reptiles given by Peter Brazatis, former Keeper, who is now Assistant Animal Manager of Reptiles at the Bronx Zoo. A man whom

we are assured will be heard from much more as an authority on the subject of reptiles.

Strange as it may seem none of the three affiliated zoos have a snake exhibit. Our Zoos are run by the New York Park Department who have not seen fit to establish such an exhibit. We are hoping for a more enlightened administration in the near future.

AAZK RARE ANIMAL EXHIBIT

Plans for our first conservation project are now being discussed. The Topeka Zoological Park, Topeka Kansas has tentatively accepted our proposal to erect an AAZK exhibit at that zoo. Several species are being considered. Among them are the Tasmanian Devil, Addax, and Red Vakari.

Ken Willingham, Conservation Chairman, will be in charge of the project and will have complete details about the first exhibit for the March issue of AAZK NEWSLETTER.

JOB LISTING

Position available-Curator

Jungle Larry's Safari Island, Sandusky, Ohio

Must have general knowledge of animals. Prefer someone who worked all areas of zoo. Must manage employees under him. Effective March 1. Salary open. Send all applications with full details and recent photo to: Fr. Lawrence E. Tetzlaff, International Zoological Society, Inc., Route 7, 5223 Rustic Hills Dr., Medina, Ohio 44256.

With the birth of its 40th youngster the Basel Zoological Gardens has proved its exceptional success with this rare species. On the 5th of April 1968, the 39th and on the 2nd of May the 40th young have been born.

The Basel line goes back to the original male and female imported in 1929 and 1931. Nother of the record young was the old cow 'Letti' who has now given birth to 12 young. The female 'Aida' also has had 12 young, while the much younger cow 'Lulu' has had 11 but has many years ahead of her and no doubt will establish an absolute record for captive births.

The Basel stud is world known and specimens born there can be seen in zoos at Berlin, Copenhagen, Tokyo, Gelsenkirchen, Erfurt, San Francisco and London. A large portion of the captive world population either has been born in Basel or is descended from stock sent to other zoos that originated here. The 40th youngster weighed in at a robust 7 kilos.

It is noteworthy that of the 40 young born in Basel, 30 have been females and ten males. A similar 3 to 1 ratio has been noted in those born at the National Zoo in Washington, which next to Basel has had the most Pigmy Hippopotamus young.

I should add that Basel born young also are among the more fecund animals exhibited in other zoos. Females born in Basel have had young in West Berlin, Tokyo (this female previously bred also in Gelsenkirchen), Copenhagen and Whipsnade. Young from these females

have in turn bred, such as the female in Brookfield Zoo who just had a baby this fall. However, it is worthy of note that the majority of males used for breeding have been wild caught.

(This article then goes on to generalities such as how the young have to learn to swim, etc., and there is a picture of the 40th young on the scale.)

(The above article has been translated by Marvin Jones from an article that appeared this summer in a Basel newspaper and sent on for his information.)

CONSERVATION NEWS by Ken Willingham, Senior Keeper, San Diego Zoo SOME HELP FOR DISAPPEARING SOUTH AMERICAN FAUNA?

C.W.Quaintance, of Western Oregon College, states that a Wild-life Conference in Colombia discussed the continuing rapid decimation of a number of Amazonian species including cats, caiman, turtles, many New World primates, otters, amphibians, and tropical fish. The native Indian collectors are penetrating deeper into forests to secure 'game' sold daily to the honorary U.S. Consul at Leticial, Colombia. In turn great numbers of animals (estimated at 200,000 'skins') were sent out of the country, chiefly to Miami. The conferees pointed out that Colombian fauna was being wiped out by U.S. exploitation while the U.S. itself does not permit such careless conduct in its own wildlife populations. Although some of this trade would continue at Manaos, Brazil, and Iquitos, Peru, until brought in check, several biologists suggested that hunting be entirely prohibited

until an inventory of numbers and an ecological survey be made. It would seem that the heavy drain of fauna might be stopped if the countries of the Amazon basin were to act as a unit in sealing off the trade while the endangered species can still make a comeback. It is hoped that the plight, not only of the Colombian, but the entire Amazonian fauna will merit significant emphasis on the agenda of the forthcoming UNESCO meeting in Paris(Sept. 4-13) where the major objectives will be to seek a scientific basis for the rational use and conservation of the resources of the biosphere.(LETTERS SCIENCE-AAZPA NEWSLETTER).

GRAY WHALES START MIGRATION PAST CITY

The California gray whales have started heading south off San Diego, California in their annual migration.

Cabrillo National Monument, official whale watching station here, said three or four of the giant mammals were seen early in December off Ocean Beach Pier. The report came from a regular, reliable whale watcher, according to Hoyt Rath, in charge of the information desk at the monument. There was an earlier report of gray whales seen off Palos Verdes vear San Pedro.

The whales, once nearly extinct, now are a herd of more than 6,000. Each year in early December they appear off Point Loma, Califon their annual swim from the Artic to the warm lagoon of the Baja, Califo penninsula.

There they calve and breed before swimming back to the Artic. They stay farther away from the coast swimming north, but they are

frequently seen as late as February.

They grow to a length of 60 feet. (SAN DIEGO UNION)

(This is one mammal that has been saved from extinction, thanks to the cooperation among whaling countries. At the present time, this species of whale is protected-LET'S HOPE IT STAYS THIS WAY).

FACTS ABOUT THE CALIFORNIA COMDOR

Restricted now to the Coast Ranges of Southern California, their range once extended to Oregon and Washington. Many Condors died when ranchers put out poison bait to kill marauding animals such as bears and cougars.

In the winter, the female lays a single egg, about four by two inches in size. Condors probably have the longest infancy of any birds since they are not full grown for more than two years.

These birds are 4 feet in length, about 34 pounds in weight, and have a wingspread of 10 feet. The coloration of these birds is brown or black with orange heads.

The bird's main food is carrion. The Condor occasionally makes its own kill of small mammals, however, its claws are quite weak and can carry comparatively little weight.

Colifornia Condors are protected and are near extinction. Every possible measure should be taken to protect this large graceful bird.

NEW RECORD

Massa, Philadelphia Zoo's gorilla, was 38 years old December 30, 1968 and how exceeds the record set by M'Toto(Ringling Bros. Barnum and Baily Circus animal who traveled the circuit from 1941 to 1956 and

lived to be nearly 37 years of age). Prior to arrival at Philadelphia, Massa's captive life began in a private home in Brooklyn in Sept. 1931 and arrived at the zoo in 1935. (AAZPA NEWSLETTER)

AAZK QUIZ

Answers to last month's quiz.

1. The Okapi is the rare animal of the Giraffe family that was discovered in 1900 in the dense forests of the Congo Valley in Africa.

2. The Rhea cannot fly, has 3 toes on each foot & is found in South America.

3. The short ears & tail of the Artic fox help it live in the cold by preventing unnecessary loss of body heat.

4The Kangaroo Rat lives its lifetime without any other water than from seeds, etc.

5. The land turtle travels 1/10 MPH. A Cheetah-65 MPH. Man-20 MPH.

QUIZ FOR THIS MONTH-MATCH THE SCIENTIFIC NAME WITH THE COMMON NAME

Adenta kob thomasi
Pongo pygmaeus abeli
Phoenicopterus ruber ruber
Testudo pardalis babcocki
Panthera onca
Felis concolor californica
Rupicola peruviana aequatorialis

Uganda Kob
Mountain Lion
American Flamingo
Jaguar
Sumatran Orangutan
Leopard Tortoise
Equatorial Cock-of-the-Rock

OUR REPTILE COLLECTION AT THE ATLANTA ZOO by Elizabeth Dobbs

The Reptile Building at the Atlanta Zoo is one of the largest in the United States, measuring 119 feet in length and 82 feet in width. Located at each end of the building are two greenhouses or solariums. 62 feet long and 28 feet wide. The two solariums are glass structures housing the crocodilian collection, which includes the alligators, caimans, crocodiles and gavials. With 12,000 gallon heated pools, and rich tropical planting, the solariums provide a naturalistic setting for the giant reptiles. The combined areas of the building and the solariums are in excess of 11,000 square feet.

The building is air-conditioned, so that the public may enjoy our glass fronted exhibits the year round in comfort. We have 125 exhibit cages and approximately 150 reserve cages and aquariums for the off-exhibit reserves.

There are almost 340 species of reptiles and amphibians represented, with about 800 individual of said species. Among these, the crocodilian collection is exceptional, for it includes 23 of the 28 known and accepted species, lacking only the Chinese alligator (Alligator sinensis), the Broad-nosed Caiman (Caiman latirostris), the Johnson's crocodile (Crocodylus johnsoni), the New Guinea crocodile (Crocodylus n. novaeguineae), and the Cuban crocodile (Crocodylus rhombifer).

Among our turtle grouping, some of the more outstanding are five Aldabra tortoises (Testudo gigantea), two Galapagos tortoises (Testudo e. nigrita), two Muhlengerg's turtles (Clemmys muhlenbergi), and one

young albino red-eared slider (Pseudemys scripta elegans).

A few of the more notable among our lizards include six of the land iguanas (Cyclura spp.), five species of the monitors (Varanus spp.), and one Madagascar plated lizard (Zonosaurus madagascariensis).

Among our snakes, of particular interest is our female Vipera latasti, which recently gave birth to four young, three of which are now feeding. To the best of our knowledge, these are the only representatives of that particular species in this country. Among our large aggregation of snakes, we are fortunate to include 17 varieties of boa (including five species of West Indian Epicrates and two Tropidophis), seven varieties of python, a Davis Mountain king snake (Lumpropeltis m. alterna), one Gold's tree cobra (Pseudohaje goldi), three varieties of the mamba (Dendroaspis spp.), two king cobras (Ophiophagus hannah), two ringhals (Hemachatus haemachatus), nine varieties of the Naja, the Palestine vipers (Vipera x. xanthina and V. x. palestinae), three subspecies of the Levantine viper (V. 1. spp.), a burrowing viper (Atractaspis b. bibronii), a melanistic Jura viper (Vipers aspis), 25 varieties of the rattlesnake including the Totonacan (C. d. totonacan) and the Mexican pygmy(S. ravus), and some other pit vipers of interest such as the bushmaster (Lachesis mutus), the habu (Trimeresurus flavoviridis), and the eyelash viper (Bothrops schlegeli).

Our amphibian collection is housed in a special air-conditioned section, and although we have a relatively small number of amphibians, among them we boast two Asiatic horned frogs (Megaphrys nasuta), three albino bullfrog tadpoles (Rana catesbiana), and three leucistic

axolotls (Sirendon mexicanum).

In conclusion, the rest of the reptile staff and I have a great deal of which to be proud. At present we are understaffed, but we hope to be at complete manpower very soon.

OBSERVATIONS OF THE HOWLER MONKEY by Rusty Spearman, Oklahoma City Zoo
The life span of the howler monkey (Alouatta) in captivity
has been pitifully short in the past. Perhaps the cause is a lack of
interest or perhaps it is the lack of available information on the
animal. Both are enough reason why we do not see the howler on display in very many zoological parks.

I would like to submit what few observations I have made on a particular pair of howlers now on display in the Oklahoma City Zoo's Children's Zoo Nursery. I am, by no means, claiming we are experts. I, myself, have only worked with them for a year and a half. This is simply a summary of what I have observed from a single pair and with no comparison to any other howlers.

We received a female mantled howler monkey (Alouatta palliatal) September 6,1966. She was quite small on arrival. Since we have no way of determining her exact age, we guess her age to be from three to five years old now, judging from the development of her canine teeth.

The male, a red howler (Alouatta seniculus) arrived January 18,1968; we estimate him to be from three to five years also. Even though his canine teeth are not as well developed as those of the

female, he is slightly larger and his beard is much fuller than hers.

Geraldine, the female, loves attention and comes racing up to the front of the cage whenever anyone enters the room. She really prefers male visitors, but never shuns female contact either. Gerald, the male, doesn't like body contact from keepers, but he is far from having an agressive nature. He seems to enjoy having an occasional shower of attention-but only from a distance. He seems slightly on the lazy side when compared to the energetic Geraldine.

The really unique thing about our howlers is their diet, which has not changed since their arrival. Individually, they receive 1 apple, 1 orange, 1 banana, chopped and served along with Ratcliffe diet(dry ground carrots, dry dog chow, Wesson oil, boiled ground horsemeat dehydrated). In addition they receive to appropriate milk with .6 cc. "Neo Vi" (Nultiple vitamins) and .6 cc "Mol Iron" (an iron supplement). This diet has thus far been appropriate for this particular pair of howler monkeys.

At first the pair was separated by a see-through sliding wire mesh door. Then the door was opened frequently so they had the opportunity to visit one another. Gerald was quite withdrawn then and stayed huddled in a corner. But energetic Geraldine had no problem and anxiously tried to get to know her new neighbor who wanted nothing to do with her. When it was evident that no civil war would result, the door remained open all the time. After Gerald became used to Geraldine, he too ventured into the other cage. Each cage is approximately 7°6° high and 3'4° wide and the temperature remains at a

sultry 90 degrees at the upper level and 70 degrees at floor level, which they seem to enjoy.

The female has been coming in estrus approximately every four weeks and we cannot be certain at what time her cycles began to occur. She is definitely no exception to the rule that the female howler pursues the male during estrus. Our Geraldine pursues Gerald constantly during her cycle, petting him and talking softly to him, and kissing him. And just until lately her pursuits had been in vain.

This past month, Geraldine was not her usual self. She did not chase Gerald back and forth through the cages crying for his attentions. On several occasions attempted breeding was observed, and we can only hope and speculate. Whether or not copulation actually occurred, we do not know. And if it did, we can only hope that the male has reached a virile age. In any event, they definitely are interested in each other and if we can continue keeping them healthy and happy, who knows!

I would be delighted to hear from anyone with any information whether from literature or personal observation, and your views on the howler monkey. Write me c/o Oklahoma City Zoo, Box 478, Route 1, Oklahoma City, Oklahoma 73111.

OBSERVATIONS ON THE BIRTH OF A PIGMY CHIMPANZEE AT SAN DIEGO ZOO by Clyde A. Hill, Associate Curator, San Diego Zoological Gardens

On 9 January 1960 the Kinshasa (Leopoldville) Zoo obtained a

male Pigmy chimpanzee (Pan paniscus) (collected at Lac Leopold II near Inongo, Congo) which was sent by air to San Diego Zoo where it arrived on 2 June 1960. It weighed 6-8 kg on arrival and was kept in the Children's Zoo where it had intensive contact with people until 14 November 1961. At that date it was transferred to the main primate collection in the zoo and was kept with other young apes. Negotiations were started with Antwerp to obtain one of their female Pigmy chimpanzees for breeding and on 2 August 1962 a female weighing 20-8 kg arrived at San Diego from Antwerp. This particular animal was collected in the Stanleyville area and was sent to Antwerp Zoo on 8 January 1958. The pair was introduced to each other successfully and proved to be compatible.

Realising that a friendly relationship between the female. Pigmy chimpanzee, 'Linda', and a keeper would be invaluable during times of illness, trauma, or motherhood, assistant principal keeper William Crytser systematically tried to gain the confidence of the female. From the start of 1964, neither chimpanzee objected to the presence of Crytser in the enclosure, except that the female was wary and kept her distance. Although she was cautious, she would allow Crytser to hand her a cup of milk, but would not allow him to touch her, nor would she touch him. As the male was already tame, Crytser was able to direct most of his efforts to gaining the confidence of the female. The male did not object and, in fact, his friendly attitude to Crytser helped considerably. Gradually the female became more trusting and by the summer of 1966 she would allow

Crytser to groom her.

Between 2400 hours of 7 August and 0300 hours of 8 August a female Pigmy chimpanzee was born. (The birth was not observed.) At 0715 hours Crytser entered the enclosure and approached the female with her newborn young. (The male had been removed from the enclosure before parturition in order that urine and other tests could be made on the female. Normally the male would have been left with the female. It was not realised at the time that birth was imminent.) She allowed Crytser to groom her and he was also allowed to touch her baby; but she would not allow him to transfer the baby from her grain to her breast. Although Crytser could not handle the baby very much, he believes that the mother was even friendlier towards him then than she had ever been before.

At 1530 hours Sudan grass hay was placed in the sleeping den and the mother made a nest from it. By nightfall the baby still had not been given the opportunity to suckle, even though it was alert and was sucking the skin and hair on its mother's abdomen. Crytser continued his observations throughout the night and he saw the infant attempt to suckle at a mammary gland on three occasions; once for 50 seconds and twice for periods of 15 seconds. Crytser manipulated the mammae shortly afterwards but no milk was expressed.

Observation continued throughout the next day, but the mother-infant relationship remained the same. The infant, carried in the groin, was seldom allowed access to the mammae and milk still could not be expressed by Crytser from the mother.

At 1500 hours on 9 August the infant was approximately 40 hours old and it was decided to remove the infant from the mother. Twelve mg of Phencyclidine hydrochloride (Sernylan, Parke, Davis and Co.) in combination with 50 mg Promazine hydrochloride (Sparine Syrup, Wyeth Laboratories) were mixed in diluted orange juice and were readily accepted. (The dosage was calculated for a chimpanzee (Pan troglodytes) weighing between 25 kg and 27 kg. The female's weight was estimated by comparing her body size to that of the male, who had a known weight of 34 kg.) Ataxia and sedation had developed sufficiently in 30 minutes for the infant to be separated from the mother. At approximately 41 hours of age the infant weighed 1,162 g. After being weighed it was fed a mixture 14 g of Similac with 113 g boiled water. An identical feed was given to the infant at 25 hour intervals throughout the night. There were five feeds, totalling a fraction less than 85 g. Following these feeds the infant gained 42 g in weight. It was given two more 14 g feeds at 25 hour intervals.

At 0630 hours, approximately 55 hours after birth, Crytser was able to express milk from the female's mammae. At 1030 hours the infant was returned to the mother. No drugs were given to the mother for tranquillisation or sedation. She accepted the infant without an emotional display of any kind and replaced it in her groin. She kept it in this position and would not put it near her mammae, although the infant tried to suckle on the mother's abdomen. The mother was calm throughout this period. An example of how tame she became was that Crytser was able to enter the sleeping den at approximately 1400

hours (about 61½ hours after birth). He lay down on the hay bedding. Since he had been constantly attending the mother chimpanzee for the past two days he was very tired. The soft bed was too difficult to resist and he fell asleep. The mother chimpanzee then climbed from the shelf in the den and lay next to Crytser on the floor. He believes he was asleep for a quarter of an hour.

At approximately 1545 hours the mother chimpanzee was again tranquillised. The infant was returned to the Children's Zoo animal nursery and placed on the previous diet and time schedule for feeds. On 12 August the diet was changed to 21 g of Similac in 113 g of water. On 13 August the diet was changed to 56 g of Similac and 113 g of water. On 16 August the formula was changed from Similac to Similac with liquid from supplement, the proportion being one part liquid Similac iron supplement to one part boiled water. 14 g of this mixture was given per feed. On 17 August the amount was raised to 21 g per feed and a three-hour feeding schedule was started. On 21 August (13 days after birth) the amount had been increased to 28 g per feed at 0700,1000, 1330,1700,2030, and 2130 hours.

In retrospect, it is evident that we took the infant away from the mother before it was absolutely necessary. The infant was very strong at 40 hours and did not really need nourishment, although its vitality was not evident while it was with the mother. Milk could not be expressed from the female's mammae until 55 hours after birth. The decision to sparate the infant from the mother should have been postponed until a minimum of 60 hours after the birth. We would

have preferred to have had the male present at the time of birth and immediately afterwards. The relationship established between the mother chimpanzee and Crytser was very useful and it allowed us to determine a number of factors. Similar arimal -keeper relationships should be established whenever possible. (The preceding articles first appeared in International Zoo Yearbook 8:119-128 1968.)

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